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EXAMINER	
PERVAN, MICHAEL	
ART UNIT	**PAPER NUMBER**
2629	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/729,796	KAPLAN, ADAM S.	
	Examiner	Art Unit	
	Michael Pervan	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Baughman (US 6,850,224).

In regards to claim 1, Baughman discloses a system for controlling the operation of an electronic device by a user (computer monitor 60, gaming system 82), comprising:

at least two transmitters (Figure 1 and col. 5, lines 27-42; since there are two computer interface devices, each being attached to a strap on a finger to which a transmitter (base 14) is attached, there are inherently at least two transmitters) in communication with said electronic device, wherein said transmitters are adapted to be worn on said user's fingers (Figure 1 and col. 5, lines 27-42), and wherein at least two of said transmitters are worn on fingers of the same hand (Figure 1);

at least one receiver configured to receive signals from said two transmitters (col. 6, line 59-col. 7, line 5); and

a control module (computer 60) in communication with said receiver and configured to send control signals to said electronic device (col. 6, line 59-col. 7, line 5;

control module (processor of computer 60) communicates with receiver via transmitter (base 14) and sends signals to electronic device (computer 60)).

In regards to claim 2, Baughman discloses the electronic device comprising a computer system (computer 60, gaming system 82, computer keyboard) (col. 6, lines 1-6).

In regards to claim 3, Baughman discloses the control signals being cursor control signals (Figure 1 and col. 5, lines 27-42).

In regards to claim 5, Baughman discloses each one of said transmitters being coupled to a ring (Figure 1 and col. 5, lines 27-42; the transmitters are attached to rings (Velcro straps)).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baughman in view of Gersheneld et al (US 5,914,701).

In regards to claim 4, Baughman does not disclose the transmitters being configured to generate an identification signal.

Gersheneld discloses the transmitters being configured to generate an identification signal (col. 6, lines 50-63; transmitter transmits the identification signal (identification number)).

It would have been obvious at the time of invention to modify Baughman with the teachings of Gersheneld, transmitters with identification signals, because it would allow the computer to distinguish between the mouse buttons on the straps.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baughman in view of Lucas et al (WO 93/04424; as submitted by applicant).

In regards to claim 6, Baughman does not disclose wherein said at least one receiver is attached to a keyboard.

Lucas discloses wherein said at least one receiver is attached to a keyboard (Fig. 1 and page 6, lines 5-7).

It would have been obvious at the time of invention to modify Baughman with the teachings of Lucas, receivers attached to the keyboard, because it allows the use of any type of wireless communication since there would not be any line of sight issues.

6. Claims 7-9, 11, 15 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger (US 6,157,368; as submitted by applicant) in view of Baughman.

In regards to claim 7, Fäger discloses a method of generating control signals for controlling an electronic device comprising:

calculating a three dimensional location of each of at least two transmitters (transducers 10A, 10B) (Fig. 11, col. 6, lines 11-19, 25-28 and col. 14, lines 39-52); and

generating a control signal based, at least in part, on changes to the calculated three dimensional location of at least one of the transmitters (transducers) (col. 14, lines 46-52).

Fäger does not disclose wherein said transmitters are worn on a user's fingers and wherein at least two of said transmitters are worn on the same hand.

Baughman wherein said transmitters are worn on a user's fingers and wherein at least two of said transmitters are worn on the same hand (Figure 1 and col. 5, lines 27-42; since there are two computer interface devices, each being attached to a strap on a finger to which a transmitter (base 14) is attached, there are at least two transmitters).

It would have been obvious at the time of invention to modify Fäger with the teachings of Baughman, transmitters worn on fingers of same hand, because it frees the user's hand and allows the user to move their fingers so that they can grasp things or type.

In regards to claim 8, Fäger discloses the changes to the location of at least one of the transmitters comprise changes in the location of the transmitter relative to at least one receiver (col. 6, lines 46-50; since the positions of the receivers (signal sources) is presumed known then the position of the transmitters (transducers 10A, 10B) must be what is changing and is relative to the receivers (signal sources)).

In regards to claim 9, Fäger discloses the changes to the location of at least one of the transmitters comprise changes in the location of the transmitter relative to at least one other transmitter (col. 14, lines 46-52).

In regards to claim 11, Fäger discloses the electronic device is a computer and the control signals control the position of a cursor on a computer display (col. 14, lines 30-38).

In regards to claim 15, Fäger discloses wherein generating the control signal is based, at least in part, on comparing the changes in location to a user-defined pattern (col. 14, lines 39-67; since the control signals are used in controlling a CAD display, the user-defined patterns emulate the object in the CAD display and its movements. Therefore, the control signals are based in part on the user-define patterns from the CAD display).

In regards to claim 19, Fäger discloses a system for controlling an electronic device comprising:

means for calculating a three dimensional location of at least two transmitters (transducers 10A, 10B) (Fig. 11, col. 6, lines 11-19, 25-28 and col. 14, lines 39-52);

and means for generating a control signal based, at least in part, on changes in the location of at least one of the transmitters (transducers) (col. 14, lines 46-52).

Fäger does not disclose wherein said transmitters are worn on a user's fingers and wherein at least two of said transmitters are worn on the same hand.

Baughman discloses wherein said transmitters are worn on a user's fingers and wherein at least two of said transmitters are worn on the same hand (Figure 1 and col. 5, lines 27-42; since there are two computer interface devices, each being attached to a strap on a finger to which a transmitter (base 14) is attached, there are at least two transmitters).

It would have been obvious at the time of invention to modify Fäger with the teachings of Baughman, transmitters worn on fingers of same hand, because it frees

the user's hand and allows the user to move their fingers so that they can grasp things or type.

In regards to claim 20, Fäger discloses said electronic device is a computer (col. 14, lines 30-38).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Gersheneld et al.

In regards to claim 10, Fäger does not disclose receiving an identification signal from each of the at least two transmitters wherein the control signal is based, at least in part, on the identification signal.

Gersheneld discloses receiving an identification signal from each of the at least two transmitters wherein the control signal is based, at least in part, on the identification signal (col. 6, lines 50-63; transmitter transmits the identification signal (identification number)).

It would have been obvious at the time of invention to modify Fäger with the teachings of Gersheneld, transmitters with identification signals, because it would allow the computer to distinguish between the transmitters.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Baughman.

In regards to claim 12, Fäger does not disclose that the transmitters are adapted to be worn on a user's fingers.

Baughman discloses that the transmitters are adapted to be worn on a user's finger (Figure 1 and col. 5, lines 27-42).

It would have been obvious at the time of invention to modify Fäger with the teachings of Baughman, transmitters adapted to be worn on a user's finger, by replacing the transmitters (transducers) of Fäger with the transmitters of Baughman because it frees the user's hand and allows the user to move their fingers so that they can grasp things or type.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Badarneh (US 2004/0051392).

In regards to claim 13, Fäger does not disclose the electronic device is a personal digital assistant.

Badarneh discloses the electronic device is a personal digital assistant (paragraph 32).

It would have been obvious at the time of invention to modify Fäger with the teachings of Badarneh because its more mobile, easier to carry and smaller than most other electronic devices.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Lucas et al.

In regards to claim 14, Fäger discloses calculating the three dimensional location comprises measuring a transit time of a signal from each of the at least two transmitters to each of at least three receivers.

Lucas discloses measuring a transit time of a signal (page 8, lines 20-22; since the distance is being determined, the transit time is also being measured because the

distance traveled is known as well as the speed at which the pulse train traveled, therefore the transit time is known as well).

It would have been obvious at the time of invention to modify Fäger with the teachings of Lucas, measuring a transit time of a signal, by incorporating the teachings of Lucas into Fäger because it's quick and accurate.

11. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Baughman in further view of Lucas et al.

In regards to claim 16, Fäger discloses a system for controlling an electronic device comprising:

at least two transmitters (col. 14, lines 39-41);

at least three receivers (M1, M2, M3, M4) configured to receive a signal from the transmitters (Fig. 1); and

a controller (CU) configured to generate a control signal based, at least in part, on changes to a location of at least one of the transmitters (col. 6, lines 25-28)

Fäger does not disclose transmitters adapted to be worn on a user's fingers, wherein at least two of said transmitters are worn on the same hand and wherein the controller is configured to calculate the location of each of the transmitters based on a distance of each of the transmitters measured from each of the receivers.

Baughman discloses transmitters adapted to be worn on a user's fingers, wherein at least two of said transmitters are worn on the same hand (Figure 1 and col. 5, lines 27-42).

It would have been obvious at the time of invention to modify Fäger with the teachings of Baughman, transmitters adapted to be worn on a user's finger, by replacing the transmitters (transducers) of Fäger with the transmitters of Baughman because it frees the user's hand and allows the user to move their fingers so that they can grasp things or type.

Fäger and Baughman do not disclose wherein the controller is configured to calculate the location of each of the transmitters based on a distance of each of the transmitters measured from each of the receivers.

Lucas discloses wherein the controller is configured to calculate the location of each of the transmitters based on a distance of each of the transmitters measured from each of the receivers. (page 8, lines 20-22).

It would have been obvious at the time of invention to modify Fäger and Baughman with the teachings of Lucas, measuring a distance of a signal, by incorporating the teachings of Lucas into Fäger because it's quick and accurate.

In regards to claim 17, Fäger discloses the electronic device being a computer (col. 14, lines 30-38).

In regards to claim 18, Fäger does not disclose at least one of the receivers being mounted on said electronic device.

Lucas discloses at least one of the receivers (transducer 2) being mounted on said electronic device (Fig. 1 and page 7, lines 5-9).

It would have been obvious at the time of invention to modify Fäger with the teachings of Lucas because the location of the receiver with regard to the electronic

device would always be know and therefore would be a good reference point for calculating distances.

Response to Arguments

12. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pervan whose telephone number is (571) 272-0910. The examiner can normally be reached on Monday - Friday between 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MVP
July 3, 2007

AMR A. AWAD
SUPERVISORY PATENT EXAMINER